

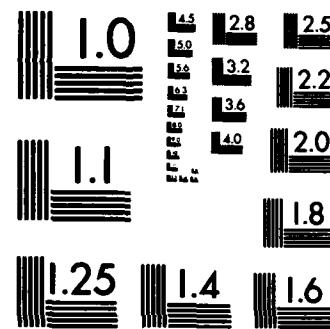
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**ENVIRONMENTAL SURVEY STUDY OF THE
MOBILE BAY AREA, MOBILE, ALABAMA**

Volume IV

Geography

Geology

Hydrology

Soils

Vegetation

Population

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CULTURAL RESOURCES RECONNAISSANCE STUDY OF THE
BLACK WARRIOR-TOMBIGBEE SYSTEM CORRIDOR, ALABAMA

VOLUME IV

SPECIAL TOPICS

by

Eugene M. Wilson

Philippe Oszuscik

Caillup B. Curren, Jr.

JoAnn Luker

1983

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ABSTRACT

This volume includes findings of a reconnaissance survey of housing and architecture, watercraft, musselling, stave-making, pull-boat logging, and engineering structures in and adjacent to the Black Warrior-Tombigbee corridor.

The housing and architecture reconnaissance was made along roads between Mobile and Demopolis. Folk derived house types and Greek Revival style buildings were dominant in the rural areas. Dwellings, stores, railroad depots, public buildings, lodges, churches, and a fort were included.

The remains of a number of unidentified, abandoned barges and steamboats were found in the lower Mobile River and in Bayou Sara. Other vessels are known to be present.

Musselling, or clam collecting for shell used mainly for making buttons, was a local industry that ended about 1965. Stave-making for barrels and casts, based on the abundance of white oak, was carried on between 1900 and 1940. Pull-boats are still used for logging swamps inaccessible to wheeled logging machinery.

Engineering structures included one tunnel, twenty bridges, and five navigation locks in the corridor which are briefly described.

The survey results suggest that many local activities were probably carried on in the corridor about which no documentation exists. Their identification and description should be the objective of future studies.

PREFACE

Cultural resources constitute a very broad field that encompasses much more than may be suggested by the half-dozen subjects reviewed in this volume. While they still live, older generations of inhabitants can provide an improved perspective on the corridor area and activities of which we are unaware or know little. Building boats, making fish traps, collecting food and medicinal plants, specialized hunting, and gardening, which is noted in Volume I of these reconnaissance reports, are some of the other topics future researchers may explore.

I wish to acknowledge the assistance of Philippe Oszuscik who has added to our understanding of regional architectural styles, particularly of churches. We appreciate the assistance of Andrea Simpson in the housing and architectural survey and of Cailup Curren who provided material on watercraft history. JoAnn Luker gathered information on musselling, stave-making, and pull-boat logging that is a contribution to the study.

Very special thanks are due Diane Hartley for her great patience with my innumerable typing requests, and to Glenn Sebastian who made department resources available to assist in the completion of this contract.

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CHAPTER I

HOUSING AND ARCHITECTURAL RECONNAISSANCE

INTRODUCTION

Study of 1979 aerial photography provided by the Corps of Engineers showed that few settlements or farmsteads were included within the boundaries of the corridor as established in the Scope of Work. Earlier, there may have been more or others in different locations, such as old St. Stephens. The housing and architectural reconnaissance followed roads parallel to the river along the higher elevations adjacent to the corridor. The assumption made was that buildings along these routes are representative of the corridor as well as the southwest part of Alabama.

The corridor of the Tombigbee River was defined as being ten miles wide south of U.S. Highway 43 and five miles wide north of U.S. Highway 43. Because of the small number of buildings in the northern portion of the corridor, communities and individual houses adjacent to its boundaries were included in the reconnaissance in order to provide a better perspective on the various styles and types.

A Geographical Model for Housing and Architectural Study

Among the objectives of this research were the identification of data useful for predicting historic cultural resource sites. In earlier publications some observations were made concerning settlement patterns that can be helpful in developing a general model of rural housing, although they were not specifically stated as a theory or model.

In a report in 1880, E. A. Smith, in Cotton Production in the State of Alabama, noted an association of agricultural systems with relative soil fertility and concentrations of Black and White farmers. "That where the blacks are in excess of the whites there are the originally most fertile lands of the state" (Smith 1880:35).

The rural Black population still is largely concentrated in areas where soils are most naturally fertile and were the basis of the nineteenth century plantation system operated by White settlers of Lowland South cultural traditions. In Alabama these areas were the Tennessee Valley, Coosa Valley and other limestone valleys of the Valley and Ridge province, the Black Belt and smaller areas in the Coastal Plain. The present day house types residual from this mid-nineteenth century period include vernacular and formal architectural styles for White landowners who, in the Black Belt, often gathered themselves in towns rather than being scattered over the landscape. For slaves and later generations of freedmen tenant farm workers, folk house types derived from European peasant houses in the coastal tidewater areas were used. These included the single pen, double pen, saddlebag, and dogtrot. With some small changes, these are the same house types used in the White Upland South cultural tradition. White landowners through the seventeenth and eighteenth centuries adopted more refined and sophisticated dwelling styles.

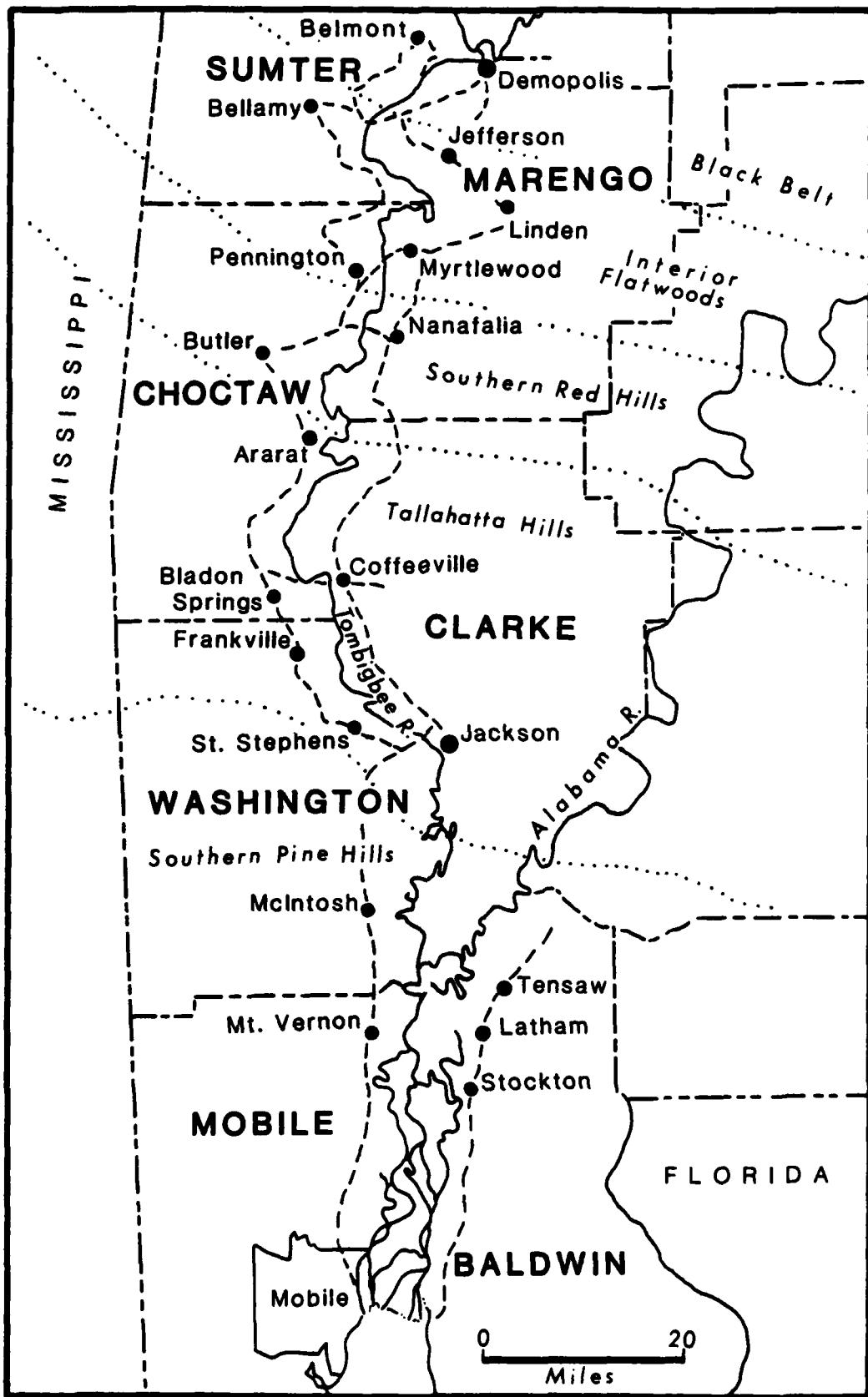


Figure 1. Black Warrior-Tombigbee reconnaissance routes.

The slave farm workers continued to be housed in the older, European-derived, house types. Following the Revolution and opening of new lands, many of the eastern tidewater landowners of Virginia and the Carolinas migrated to the new areas taking with them their plantation system. Examples are still to be found in the Tennessee Valley, for example at Mooresville, and in the Black Belt towns of Lowndesboro, Selma, Demopolis and Greensboro.

Smith (1880) further noted that where Whites were a slight majority, or where Whites and Blacks were about equal in number, the soils were of average fertility. If Whites were the great majority, the soils were predictably below average fertility. In northern and central Alabama, a geographical correlation exists between the distribution of dwelling types, topography, soils, and economic history; in fact, the dwelling types can be used to predict these past associations.

At the opposite pole from the plantation system are those areas of the state in which few, if any, Blacks lived during the mid-nineteenth century. The outstanding examples are the Warrior Basin and nearly all of the plateau-like mountains and ridges of the Appalachian Highlands, the hill lands of the Coastal Plain (such as the Tallahatta Hills) and the Wiregrass district of southeastern Alabama. Some of these sections were still being homesteaded after 1900 and the subsistence farming with open-range livestock remained in the Wiregrass district of Alabama and Florida well into the twentieth century. In these rural areas, one does not find residual Greek Revival architecture, or black tenant housing associated with the plantation system, since it did not exist in these agriculturally marginal areas.

General Observations Concerning Housing

1. The origins of Alabama folk house types lie primarily in the traditions of British and German settlers, synthesized by c. 1800 as part of two distinctive culture sub-types - one in the Atlantic tidewater from Philadelphia to Savanna and one in the interior uplands from Lancaster, Pennsylvania to Augusta, Georgia.
2. The major rural folk house types of Alabama were the single pen, double pen, saddlebag and dogtrot. The two-story I house was present but not abundant. The shotgun type was added in the nineteenth century but has remained primarily an urban house type. The pyramidal roof houses were the first popular non-folk designs after 1860. Around 1900 bungalow houses were introduced. All of these were the dominant rural house types until c. 1940.
3. In Alabama, a geographical pattern of house types, population density, and ratio of Blacks to Whites, can be correlated with topography, soil fertility and economic history in rural areas.
 - a) Low population density is characteristic of areas that are hilly, have low natural soil fertility or both (usually) except where modern industries or new agricultural techniques and fertilizers have been introduced. Upland South culture

traits and the White population dominate these areas. Subsistence farming and/or open-range livestock grazing were the nineteenth century economies. These areas have undergone the greatest degree of change in land use since 1870.

- b) Black population is numerically high in areas of low to moderate slopes and high natural soil fertility, particularly on alluvial terraces and limestone derived soils. The plantation slave and plantation tenant systems were formerly dominant. These areas have undergone the least degree of land use change since 1850 and retain many of the Lowland South culture traits.
- 4. New housing designs had their greatest acceptance during times of economic prosperity.
- 5. Where the primary economy has been relatively stabilized, housing designs change very little.
- 6. Housing styles and house types undergo a gradual evolution with earlier houses modified with newer style features and appendages.
- 7. Urban areas are centers of housing innovation and inhabitants of rural areas accept new designs slowly, thus, a time lag exists between the two.
- 8. Rural areas change more slowly than urban areas, in general, and early design features persist in rural areas long after their urban introduction.
- 9. Old styles and old house types are handed down to lower socio-economic levels and are thus subject to associations with relative poverty.
- 10. There may always be some local exceptions to the above.

The results of this reconnaissance have generally agreed with the above observations. The survey of buildings followed routes closest to the river along the higher elevations adjacent to the corridor, since the rivers are entrenched to form a narrow alluvial valley and delta at lower elevations. Throughout the corridor, the prevailing agricultural land use is above the present floodplain. Some exceptions existed, however. In the Sunflower Bend area, a group of buildings, probably tenant structures, once occupied the natural levee and accretion ridges on the floodplain. Other clearings for pasture occur in the floodplain but there is no permanent occupation because of seasonal inundation.

Two topographic/physiographic surfaces were most suited for agriculture in the corridor. These are alluvial terraces, produced when streams entrench floodplain deposits, and gently sloping surfaces of various older geologic units adjacent to the valley. Since the study corridor is rather narrow, the primary upland surfaces were alluvial terraces.

Beginning at the northern end, at Demopolis Lock and Dam, the corridor extends through a portion of the Black Belt, most of which is Demopolis chalk overlain by extensive alluvial deposits. Outliers of sand and gravel-capped hills occur in the vicinity of Belmont, Alabama. Such deposits are the most desirable house and town site locations throughout the Black Belt. They are not subject to flooding but are well drained and permeable, providing dry, trafficable surfaces and ground water supplies. However, on the clay soils derived from the chalk and marl, the permeability is very low. Few streams originate on the surface and the clays retain water, making the surface extremely adhesive to vehicle wheels and animal hooves. Early settlers soon discovered that the oak and pine-covered sand and gravel uplands were the best sites and in time, nearly all of the towns and plantations in the region were located on old river deposits or on the sandy uplands on either side of the Black Belt.

Black tenant houses are scattered along the low river terrace surface today. The only Black Belt town south of Demopolis of importance is Jefferson, located on an upper terrace just outside the corridor. This small place contains about a dozen mid-nineteenth century structures of architectural interest. Also lying near the corridor, at the boundary between the Black Belt and the Flatwoods, is Bellamy, in Sumter County, an interesting sawmill town. Bellamy contains many quarters for Black workers all of which are frame folk houses.

In the Flatwoods the corridor extends through sandy hills following a great eastward bend in the meandering Tombigbee. The area is used mostly for timber and dwellings and farms are few and widely scattered. Terraces along the eastern side are cultivated but only about twenty percent of the floodplain is cleared. Myrtlewood, located on a high, eroded terrace on the east side of the corridor in Marengo County, is the largest place and contains several interesting structures. Possibly the oldest is a plantation house now in ruins. A smaller settlement on the west side of the corridor in Choctaw County is Pennington, situated on a low terrace, which serves a large paper mill near the Tombigbee River.

In the Red Hills district, the corridor passes through a very hilly area with the floodplain narrowing to two and one-half miles. The settlements are very small and mostly Black. On the west riverbank, just off Alabama 10 and north of the Tombigbee River bridge, is the original Ezell's Catfish Cabin, a well known restaurant and first of a state-wide chain. The "cabin" is an early log dogtrot, c. 1830, now much modified.

Southward, the floodplain widens to over five miles but contains few clearings and no structures. Putnam, on a high, eroded terrace surface near the corridor, contains several late nineteenth century and early twentieth century buildings. Butler, a virtual metropolis, lies five and one-half miles west of the corridor. Outside of the corridor at Nanafalia is one of the earliest houses associated with the river. Built c. 1835 by a riverboat captain named Mathers, it is in relatively good condition (Figure 28). It is raised six to seven feet on brick piers and contains Federal Style features.

To the south of the Red Hills, where the corridor passes into the Tallahatta Hills, the river develops large meanders. The uplands are strongly dissected along the Buhrstone Cuesta. The Tombigbee River floodplain is constricted to less than 8/10 of a mile in width at Mile 128 and local relief in the uplands in the vicinity reaches 200 feet. The northern half of the Tallahatta Hills section of the corridor contains only five small settlements of several houses each. One unnamed settlement on the west side includes a log dogtrot house, built c. 1830 in good condition (Figure 9). The northern Tallahatta Hills appears to serve only as a source of timber and it is doubtful that much of it was ever cultivated.

Farther south, the Tallahatta-Hatchetigbee Hills section contains the settlements of Womack Hill, West Bend, Coffeeville, Tatlersville, and Salitpa around which some farming continues. These contain Black tenant houses, nineteenth century folk houses and an occasional plantation house, notably at Coffeeville. The settlement pattern closely follows the gently sloping terrace and older geologic surfaces which are rarely more than one-quarter mile in this area. Agriculture, by necessity confined to these small surfaces, was never as important as in the Black Belt.

The Southern or Rolling Pine Hills continues to be very hilly for most of its extent. Only in the vicinity of Jackson, and adjacent Leroy, are fairly flat surfaces observed. The most extensive, at Leroy, covers approximately five square miles. Jackson is by far the largest town in the corridor and contains a mixture of housing styles. A fairly large number of Blacks work in local lumber, paper, and sand and gravel industries. The southern portion of Clarke County is very rugged. Along the southern edge, near the floodplains of the Alabama and Tombigbee Rivers and at Carney's Bluff, are a number of dispersed Black farmsteads. The common house types appear to be bungalows or other recent types. Farther south, hunting/fishing camp houses are built along small terrace remnants and natural levees along the river.

The Mobile Delta is divided into three parts - the meander zone in the north, the swamp, and the marsh at the southern end of the corridor. Boundaries of the corridor include some sections of U.S. 43 and Alabama 225 which parallel the delta. No early structures remain to show significant French influence. A few house types from the late nineteenth and early twentieth centuries retain double front doors, central chimneys and built-in porches. Anglo-American architecture is now dominant and most buildings today are less than forty years old. Along U.S. 43, which follows a long terrace surface, are a large number of Blacks. Probably most of these people were attracted to work in the forest industries, particularly logging. Others have more recently been attracted to jobs in the chemical industries along the west bank of the Mobile River.

RECONNAISSANCE OF HISTORIC BUILDINGS IN THE
BLACK WARRIOR-TOMBIGBEE CORRIDOR

Philippe Oszuscik

The earliest European settlers in the Mobile River valley were French, who established Fort Louis in 1702. South of the thirty-first parallel, settlements reflect French influences in name, and with some surviving folk traditions in architecture. After 1817, Anglo-American settlers poured into the area establishing the dominant cultural heritage. North of the thirty-first parallel, the main cultural influence has always been Anglo-American, although Fort St. Stephens was built in 1789 by the Spanish on the Tombigbee.

Basic Classes of Buildings

A folk house is a cultural product. Its distribution reveals the cultural origins of its inhabitants so that a house type is a template or expression of the people living in it. As the social beliefs of the people change, the form of the house changes to express the new folk view (Rapoport, 1969:47). In studying the historic houses of the corridor, the cultural heritage of the inhabitants was revealed.

In addition to the study of folk housing, this reconnaissance was concerned with the search for historic vernacular and professional level architecture as well. At those levels, any functional commercial or civic type was analyzed in addition to housing. The order of material presented is: folk housing, vernacular housing, civic and commercial buildings, churches, and forts. Houses are divided into two sections because of the great number involved. Since most of the vernacular examples actually continue folk traditions, the dividing line between folk and vernacular architecture becomes arbitrary; the apparent intent of the builder is the main consideration for the division in the report. If the design is basic construction with minimal outside influences, such as Greek Revival, Queen Anne, etc., it is discussed in the folk section. If the house was designed to appear "up town" rather than "down home," and was probably produced by a craftsman-builder, it is considered with the vernacular examples, even if obvious folk traditions are evident in the design. An example may be discussed in two sections if important points can be deduced from the same house.

Folk Houses

The Black Warrior-Tombigbee corridor has examples of folk architecture that represent a French creole folk origin, creole because it is a New World blend of Norman French, Canadian French, West Indian and Gulf Coast Indian elements. Also from the Caribbean, but introduced later, was the shotgun house. Anglo-Americans, shortly after 1800 when the territory was opening and Indians were being removed, introduced new folk traditions. They came southward into Alabama from Tennessee and

westward from South Carolina and Georgia. Mostly from the Upland South, they introduced into Alabama log building and the single pen, double pen, saddlebag and dogtrot houses. Other settlers from the Lowland South brought the hall and parlor, central hall, the I house, and Georgian plans, all built mainly with frame construction and representing folk level imitations of high fashion houses.

Caribbean Folk House Traditions

The first Europeans to successfully settle on the Alabama Gulf Coast were the French. Appropriately, the first folk tradition to be considered is the French creole cottage, a modified version of a farm house. Examples can be found in the Mobile River Valley in both Mobile and Baldwin Counties in the area extending from Mobile to Mount Vernon and Tensaw. Although it has columns associated with the Greek Revival style, one example is a cottage located one mile south of Latham, dating c. 1910 (Figure 2). Characteristically, it has two front doors, an integral gallery, rather steep roof, central chimney and a four room plan (Vlach 1980:4; Newton 1971:13). The rear gallery of this cottage was enclosed to form more interior space. An example on the Mobile County side is located in Mount Vernon (Figure 3). It has a four room plan and central chimney but also an altered facade.

Included at this point is the shotgun house because this folk house type is considered to be a contribution from the French West Indies. It was introduced to the Gulf Coast during the St. Domingue refugee migrations to New Orleans between 1790 and 1810. Shotgun-like houses in Haiti predate those in New Orleans and shotguns in both places share a similar plan, dimensions, pattern of room use and decoration. It is recognized as a creole house because it has construction origins associated with West Africans, Arawak Indians, and the French, and it developed in Haiti (Vlach 1980:9-11). The shotgun house is one room wide, at least three rooms deep and has a front and sometimes rear gallery, although the rear gallery by the end of the nineteenth century was often half enclosed to form a small room.

The earliest shotgun houses, as influenced directly from the Caribbean, were built with hipped roofs and integral porches. Common in New Orleans, this type is rarer in the Mobile area, but early twentieth century examples can be seen in Africa Town, in northeast Mobile (Figure 4). A more common early type, is the gable roof shotgun with an integral porch (Figure 5). Another variation includes a separate, attached gable roof built over the porch (Figure 6).

Anglo-American Folk House Traditions

The basic folk houses of the Anglo-Americans from Britain were built originally of half-timber and often were covered with clapboards. The Upland Southerners who came into Alabama from Virginia, Tennessee, the Carolinas and Georgia had ancestors who had contact with German settlers in southeastern Pennsylvania and had learned log construction while retaining their own folk plans.

The basic southern folk house is a single room cottage called a single pen; the first ones in Alabama were most likely of log construction. Three periods of folk house evolution may be recognized in Upland South districts. The first was the construction of houses with logs of ample dimensions and of good craftsmanship, to c. 1850. In the second, period smaller log houses illustrate the decline in craftsmanship, c. 1840-1940. Clapboards sometimes hid the log construction of this generation of houses. The last period is characterized by houses of either clapboard or board and batten siding on frame construction, c. 1875-1920 (Wilson 1975:25-26). The double pen, saddlebag and dogtrot were common elaborations upon the basic one-room cottage.

Today, few log examples are found in the Tombigbee area. One log house, photographed east of Coffeeville outside the corridor in Clarke County (Figure 7), is a modified single pen house built of split logs with half-dovetail cornering. The lean-to rear addition gives the house a side silhouette typical of Deep South traditions. The separate kitchen building was placed behind the main house. Houses with similar lean-tos and outbuildings were brought into this area by way of Georgia (Glassie 1968:105).

Most existing single pens in the survey area are third generation, or built after 1875; some are vacant and in a decaying state. Most single pens that were observed were behind present dwellings.

Not as common in the survey area is the double pen. Early log examples of the double pen appear as two single pens joined together with chimneys on the end elevations and separate front doors for each pen. Out of tradition, the use of two front doors continued when the house was of frame construction.

The saddlebag is also present in the lower Black Warrior-Tombigbee corridor. It has two single pens joined and the two rooms share the same chimney, located in the center rather than at the gable walls like the double pen and dogtrot. Some folk houses in Marengo County between U.S. 80 and Jefferson on Alabama 28 share a recent attached porch type that only extends across the center portion over the two front doors (Figure 8). In general, the silhouette of the design is plain, with the lean-to porch roof continuing the angle of the main roof.

Dogtrots are the most common type of folk house found in the area. They are least numerous adjacent to the Mobile River where shotguns and creole cottages are common. Henry Glassie observed that dogtrotts are more common in the Lowland South from Georgia to Texas than from Tennessee north (Glassie 1968:101). The dogtrot can be viewed as two single pens placed next to each other with space between with one common roof leaving an open hall between. An "open hall" house might be a better label as the breezeway is generally called a hall by its inhabitants and used as such. "Dogtrot," "possum trot," and "turkey trot," are terms that have been used to label this house type because of the "down-home" ring (Glassie 1968:98).

All the folk house types, the single pen, double pen, saddlebag, and dogtrot, were probably present during the early nineteenth century,



Figure 2. Creole house, Latham,
Baldwin County, c.
1900-1910.



Figure 3. Creole house, Mount
Vernon, Mobile County,
c. 1900.



Figure 4. Hipped roof shotgun,
Africa Town, Mobile,
post 1900.



Figure 5. Gable roof shotguns,
Africa Town, Mobile,
c. 1900.



Figure 6. Gable roof shotguns,
near Mount Vernon,
Mobile County, c.
1940.



Figure 7. Single pen, near
Coffeeville, Clarke
County, c. 1880.

however, few remain. Three early dogtrot were located during the reconnaissance. One (Figure 9), five miles south of Ararat in Choctaw County, has hewn logs with square cornering, and dates from 1830-1840. A second is Ezell's "Catfish Cabin" restaurant east of Butler, built c. 1830. Another early dogtrot is the Mims-Warren house in Tensaw (Figure 10), believed to have been built between 1820 and 1840. This house was built of heavy frame construction.

Another frame dogtrot (Figure 11), built c. 1930, on Alabama Highway 28 near U.S. 80 in Marengo County, is representative of the plain houses often used for rural farm workers.

In the mid-section of the corridor in Washington County and in Clarke County, the frame, or third generation, dogtrots were developed in a great variety of plans. A general evolution can be seen from the basic dogtrot to a more sophisticated vernacular level variation that developed by 1900, reflecting newer, fashionable house styles that came into the area and eventually subdued the folk house traditions. A Clarke County frame dogtrot (Figure 12) east of Coffeeville has a small front room enclosing a corner of the porch and a portion of the rear porch was also enclosed to form a room. The separate kitchen was connected to the house with a second breezeway. The addition of partitions and the roof sections, or planning of these extras from the beginning, illustrate the evolutionary process. To the basic dogtrot plan, porches were added and the kitchen was connected by a second breezeway; later the kitchen breezeway was enclosed forming an L-plan. By enclosing part of the porches, a two-room-deep dogtrot, and even transverse dogtrot variations, evolved.

Plans which may have begun as additions to dogtrots in earlier years, were preplanned in later dogtrot variations. With the addition of a room to the front and the enclosure of a rear breezeway to the kitchen wing, a T-plan dogtrot evolved. A T-plan dogtrot recorded in St. Stephens, built c. 1900 (Figure 13), illustrates the greater sophistication that elevated the dogtrot to a vernacular level. Examples of L and T plans are found in Washington and Clarke Counties and in all cases, the dogtrot breezeway is at the junction point of the perpendicular formed in the plan.

Other Anglo-American Folk House Traditions

The I house, the highest status type for the Upland South, is found mainly in towns in the Black Warrior-Tombigbee corridor. Most extant examples belong to a vernacular rather than to a folk level, as in the case of the Vickers-Chapman house in Grove Hill (Figure 14), built about the mid-nineteenth century. One I house in Frankville which was built originally as a folk dwelling during the mid-nineteenth century was later re-decorated with a one-story, late Victorian porch (Figure 15). An example in St. Stephens was built with a hallway and a room to one side (Figure 16). This house served as a hotel at one time and was constructed with timbers from the old territorial capitol of Alabama.



Figure 8. Third generation saddlebag, Alabama Highway 28, Marengo County, c. 1900.



Figure 9. First generation log dogtrot, near Ararat, Choctaw County, c. 1830.



Figure 10. Mims-Warren dogtrot, Baldwin County, c. 1820-1840.



Figure 11. Third generation dogtrot, Alabama Highway 28, Marengo County, c. 1930.



Figure 12. Third generation dogtrot, near Coffeeville, Clarke County, late nineteenth century.



Figure 13. T-plan dogtrot, St. Stephens, Washington County, c. 1900.

The Foscue house, near Demopolis, is an I house built in 1840 (Figure 17). It was later enlarged, as the different color of brick in the exterior walls clearly reveals. It is unusual, being the only large historical brick house in the corridor.

Non-Traditional House Plans

The pyramidal roof house and the bungalow are two non-traditional house types which are found in the survey area. The pyramidal roof house (Figures 18 and 19), generally square in plan, was introduced to Alabama during the mid-nineteenth century, and was widespread by the last quarter of the century. The most likely prototype for the pyramidal roof house was a Georgian plan (Wilson 1975:45-50). The pyramidal roof house normally has a central hall and two rooms on each side with all four rooms being of equal size (Glassie 1968:112). Many have porches at the front and rear and on one or two sides with shed roofs that join just under the eave of the main roof.

The bungalow house has great variety in plan. The roof may have side gables but front and rear facing gables are more common and resembles the shotgun house in this respect. Bungalows are usually two rooms wide and three rooms deep with one or two front doors. All have a front porch and often bungalows have exposed rafters projecting from the eaves, with brackets under the gables, and short tapered piers on plinths and a porch base (Figures 20 and 21). Dormers are often present on the side facing gable roof bungalows.

Vernacular Housing

It might be appropriate to compare two classes of building designs. On one hand, folk building can be viewed as architecture built by the people for the people in simple plans, employing old traditions recalled from structures known to the builder. At the other extreme is architecture designed by a professional who is concerned with formal design principles, originality of design and fashionable stylistic trends. Before 1860, one became a professional designer in the United States by serving as a draftsman and apprentice to an established architect in his office. The first architectural degree program in the country was offered in 1860 by M.I.T., followed in 1870 by the University of Illinois (Burchard and Bush-Brown 1966:186). No existing buildings in the study area were identified as the work of a professional architect with the exception of Mt. Vernon Barracks which may have involved a military engineer/architect.

Vernacular architecture refers to common, local or regional buildings and, by extension, to any style that lacks the sophistication of a professional design (Oszuscik 1981:10-11). Vernacular designs exhibit a wide range of appearance from folk to professional and were produced by a trained individual called the craftsman-builder, who apprenticed as carpenter, brickmason, or stonemason and worked his way up to the title of master builder. By the time school-trained architects appeared on the scene, experienced builders who could read plans and use



Figure 14. I house (Vickers residence), Grove Hill, Clarke County, mid-nineteenth century.



Figure 16. I house (Stuart), St. Stephens, Washington County, c. 1830.



Figure 18. Pyramidal roof house, Stockton, Baldwin County, c. 1900.



Figure 15. I house (Reynolds), Frankville, Washington County, middle to late nineteenth century.



Figure 17. Foscue house, Georgian plan, U.S. Highway 80 near Demopolis, Marengo County, 1840.



Figure 19. Wilson pyramidal roof house, St. Stephens, Washington County, 1924.

architectural handbooks began to use the term contractor rather than builder. In turn, other experienced contractors, who had earned a good reputation, began to advertise as architects. Many of these self-trained architects hired carpenters, masons and draftsmen and could undertake any type of project in their own architectural firms. The craftsman-builder understood folk traditions and could build a home with only a loose verbal contract about its size and style. He could also work from an architect's plans in erecting elaborate projects (Oszuscik 1979:230).

Most examples of vernacular houses in the corridor were in actuality modified Deep South folk types, particularly the double pen, saddlebag, dogtrot, I house, and pyramidal roof houses. The following section on vernacular houses will include various modified folk traditions, followed by other vernacular types, rather than a chronological presentation of nineteenth century architectural styles. The predominant taste for the Greek Revival in the study area resulted in an incomplete representation of the stylistic possibilities available to nineteenth century craftsman-builders. Time did not permit a thorough site analysis of every house, consequently, certain conclusions of this report need to be verified by an interior as well as exterior analysis in a future comprehensive study.

The Rhodes house in Jefferson, built c. 1850 (Figure 22), is based on a double pen and has Greek Revival decorations. The structure has a one story, three bay temple-like portico. Its window heads have slightly pedimented lintels, possibly the hallmark of one particular craftsman-builder in Jefferson who used the same type on several buildings. In Belmont, the Greek Revival Spidle house, built in 1853 (Figure 23), also with a one story portico, appears to be based on the dogtrot. Like the Rhodes house, it has piers for "columns." Its unusual characteristic is that the echinus of each pier appears round as on columns.

In Coffeeville, some L-plan central hall houses were built. A very large two-story, classic revival example (Figure 24) had its breezeway closed in. A smaller one-story, L-plan cottage with an enclosed hall (Figure 25) was designed with a bay window and its gables were textured with fish scale shingles, creating a vernacular Queen Anne style house. The builder apparently attempted to keep up with high architectural fashions.

The next group of vernacular houses to be considered resemble the folk houses with the central hall, the I and Georgian plans. These plans, popular for the folk and vernacular level examples, filtered down from high fashion homes of an earlier era. The evolutionary process was simple. After professional architects designed and built fashionable mansions for rich patrons, others had the structures emulated by craftsmen-builders in their smaller, vernacular versions. Finally, the fashion was a more simplified design at the folk level.



Figure 20. Cottage, Alabama
Highway 69, Clarke
County, c. 1900.



Figure 21. Bungalow, Satsuma,
Mobile County, c.
1910.



Figure 22. Rhodes house, Greek
Revival, Jefferson,
Marengo County,
1850s.



Figure 23. Spidle house, Greek
Revival, Belmont,
Sumter County, 1853.

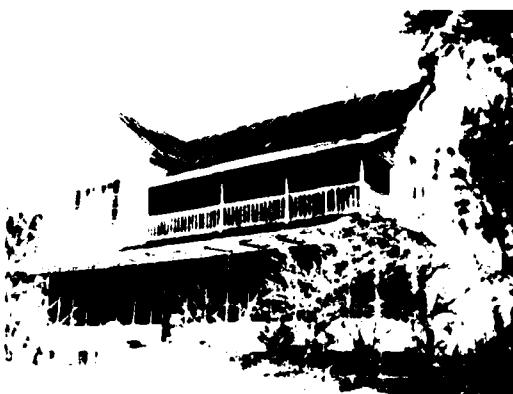


Figure 24. Two story Classic
Revival, Alabama
Highway 69, Clarke
County, late nine-
teenth century.



Figure 25. Queen Anne cottage,
Coffeyville, Clarke
County, c. 1900.

Many small central hall, Greek Revival houses were observed throughout the survey, including the example of Bladen Springs (Figure 26). Typically, they were built with a full-length front gallery, a full entablature across the facade, and piers in place of columns.

A two-story, central hall house located at Tensaw, dates from the 1840s (Figure 27). It exhibits the use of Greek Revival details as previously described. The small room in the rear exhibits the evolutionary process by which an I house developed into a Georgian plan.

The earliest existing Georgian plan residence near the corridor is the Mathers house near Nanafalia, built c. 1835 (Figure 28). This raised, one-and-one half story house includes traits typical of a Gulf Coast creole cottage. For example, it is raised seven feet off the ground, has central exterior steps leading to the first story and has a steep roof pitch. However, its four (originally) gable end chimneys represent an Anglo-American tradition. The first owner was a steamboat captain who, possibly as a result of his travels, built a Gulf Coast amalgamation of the French creole and Anglo-American Georgian traditions. All the doors, windows and chimney pieces are decorated in a Federal period style.

The largest homes in and near Jefferson in Marengo County were two-story, Greek Revival, Georgian plan homes that could have been built c. 1848 by the same builder. Evergreen (Figure 29) was built with a hipped roof and integral, full-height colonnade. The Simmons house was constructed with a gable roof and a three bay, two-story portico. Piers, rather than columns, were used in both examples. One Georgian plan house was built with the entrance on the gable end so that the entire facade resembled that of a temple. This late Greek Revival example (Figure 30) is located in Stockton. The shift of the entrance to the gable side, the exaggerated Greek Revival "keyhole" front door, and extremely high windows are indicators of the late phase of the style.

Although outside of the corridor, a good example of a vernacular Italianate style house is located in Grove Hill (Figure 31). Its nearly square plan, simple brackets, and arched windows are indicative of a pre-Civil War construction date, probably between 1850 and 1860. The hipped roof with projecting bracketed eaves is typical of the Italianate style.

Two cottages in Coffeeville seem to have been inspired from picturesque revival styles rather than neo-classicism. One, a Carpenter Gothic cottage (Figure 32), includes steeply pitched gables, bargeboards, jig-saw gable trim, an asymmetrical plan and an irregular silhouette. Its trim indicates a late nineteenth century date. Another example in Coffeeville, built c. 1900 (Figure 33), was built with symmetrical gabled projections toward the street from the main gable roof. A possible source for this form is Downing's Architecture of Country Houses (1850:300). Many plain cottages in the area with twin gables reflect a regional folk development of this house style. Rather than having a specific style, the decorative elements of this Coffeeville house can be best described as Stick and Shingle (Scully 1971:71).



Figure 26. Holcombe house,
Greek Revival Cot-
tage, Bladen Springs,
Choctaw County, 1850s.



Figure 27. Watkinson-Till house,
Tensaw, Baldwin County,
c. 1840s.



Figure 28. Mathers house, near
Nanafalia, Marengo
County, c. 1835.



Figure 29. "Evergreen" (Allen
house), Jefferson,
Marengo County, 1848.



Figure 30. Cox house, Stockton,
Baldwin County, 1870s.



Figure 31. Italianate house,
Grove Hill, Clarke
County, c. 1860.

COMMERCIAL AND CIVIC BUILDINGS

Stores

A deserted store is the only commercial structure in the hamlet called Silver Cross, in Washington County. It appears to sit in the yard of a rural cottage off Alabama Highway 6 (Figure 34). The sandy road curving in front of the store, formerly the highway, was replaced by the pavement which now cuts off the site. It is typical of rural stores patterned after nineteenth century Greek Revival buildings (Pulliam and Newton 1973) and resembles the shotgun house type. Similar structures illustrate other porch treatments. The Leroy Post Office, which is still in use, has a gable roof. In Mt. Vernon, the "Health Center," formerly a store, has a front and side porch. One vacated store in Jefferson, built in the 1850s (Figure 35), resembles a small Greek Revival cottage with its one-bay, pedimented portico and gable side chimney.

Depots

Railroads follow the Mobile and Tombigbee Rivers between Mobile and Jackson, and between Demopolis and Linden, where the railroad turns west-to cross the Tombigbee into Choctaw County. The nostalgia of railroad trains has prompted some local historical organizations, and individuals, to preserve some depots for adaptive use. The former late nineteenth century Mt. Vernon depot was moved and converted into a community center. The Linden depot (Figure 36), slightly older, is Stick style and is painted effectively to emphasize its skeletal wood qualities. It also has a variety of materials, textures, and a more irregular silhouette. Its long rectangular plan is divided into visual modules to break up a continuous horizontal flow, further qualities of the Stick style (Meeks 1964: 23-24). The Jackson depot (Figure 37), also late nineteenth century, still functions as a depot. All three were designed in the typical low, long, rectangular plan of the period, aligned parallel to the tracks, and have sweeping eaves, supported by brackets, reaching over the pedestrian areas (Meeks 1964:24-25).

Courthouses, Town Halls, and Lodges

The old Marengo County Courthouse (1848), in Linden, represents typical, nineteenth century courthouse design and style (Figure 38). Placing the entrance on the gable end of the rectangular temple-style structure is a Jeffersonian tradition from the Federal period. Many mid-nineteenth century courthouses had entrances on the longer side or an entrance on each side of a square plan building located in a town square. Linden's courthouse exemplified the latest architectural fashion of its day, a dignified use of the Greek Revival, a "temple in antis" type in which the portico is formed by the projecting side walls with two columns set between their ends. The ends of these walls are extra thick to conceal the pair of external staircases leading to the



Figure 32. Carpenter Gothic cottage, Coffeeville, Clarke County, late nineteenth century.



Figure 33. Twin gable facade house, Coffeeville, Clarke County, c. 1900.



Figure 34. Old store, Silver Cross, Washington County, late nineteenth century.



Figure 35. Simmon's Store, Jefferson, Marengo County, 1850s.



Figure 36. Linden Depot Restaurant, Linden, Marengo County, late nineteenth century.



Figure 37. Depot, Jackson, Clarke County, c. 1900.

second story gallery. The external staircase is another feature from the early nineteenth century. The Marengo Courthouse is a brick structure, but its facade is stuccoed to resemble white stonework, another common practice of its period.

Town halls may be visualized as either a small courthouse or a house (hall) for the government for an individual town. The McIntosh Town Hall (Figure 39) resembles a shotgun house or a small one-story, vernacular version of a classic revival courthouse.

Two Masonic halls were found during this reconnaissance, Baldwin Lodge 142 F & AM in Stockton (Figure 40) and St. Stephens Lodge Number 81 (Figure 41). Both are two-story frame buildings typical of those found in small towns throughout the South. Perhaps some formula was used which called for a two-story, porticoed frame building, with a simple classic revival style and the Masonic emblem positioned at the apex of the pediment. The St. Stephens lodge has logs with their bark removed for columns.

Churches

A large number of historic churches exist in the Tombigbee-Mobile Valley. An observation made in the corridor is that most churches located near the main roadway belong to White congregations, whereas, most churches for Black congregations tend to be placed farther from the road and are post 1900.

About half of the nineteenth century churches represent classic revival styles and the other half, medieval revival. The two principal denominations are Baptist and Methodist with their churches equally representative of classic and medieval revival styles.

Classic Revival Churches. The United Methodist Church in McIntosh is built of hewn log although it was not the earliest dated church of the survey (Figure 42). It is one of few existing log churches in the state, therefore, historically worthy of preservation. Despite its basic one room design, it captures the essence of a simple classic temple design which was so popular at the time of its construction in 1860. Although it may have had a pedimented porch originally, the present one must date about 1910 as its piers on plinths are similar in design to those found on bungalows. Very similar in basic design is the Montgomery Hill Baptist Church in Tensaw, built in 1854 (Figure 43), in a simple rectangular plan without a porch or portico. The addition of a full height portico to this design, results in an example like the Stockton Methodist Church, built in the mid-nineteenth century (Figure 44). A low belfry over the classic portico produced the design of the First Baptist Church of St. Stephens, built in the 1880s.

The next three examples illustrate a possible evolution of a particular contemporary, Black, rural church design from Greek Revival origins. The model is a "temple in antis" design as in the Jefferson Methodist Church (Figure 45) which recalls the same facade scheme of the Marengo



Figure 38. Marengo County
Courthouse, Linden,
1848.



Figure 39. McIntosh Town Hall,
Washington County,
c. 1900.



Figure 40. Baldwin Lodge 142
F & AM, Stockton,
Baldwin County,
c. 1850.



Figure 41. St. Stephens Lodge
No. 81, Washington
County, 1854.



Figure 42. United Methodist
Church, McIntosh,
Washington County,
1860.



Figure 43. Montgomery Hill
Baptist Church,
Tensaw, Baldwin
County, 1854.

Courthouse. This particular church, built in 1856, includes a classic style belfry over its portico and has two entrance doors. If the belfry was removed, a smaller, more vernacular, Greek Revival edifice results, such as that of the Belmont Methodist Church, also of the 1850s (Figure 46). The final step in the simplification process appears in the vernacular design of Jerusalem Number Two, located on Alabama 69 southwest of Linden (Figure 47). Despite its 1940s date, it was constructed in a common vernacular design formula seen in many rural churches. The simplicity, directness and a minimal design quality in this church are, in fact, indicative of a relaxation from the classic European design principle of tight-ordered symmetry. This church has symmetry for the main part, but the belfry was placed to one side rather than on the ridge of the roof which relieves its strict formality, possibly a design improvisation by the builders (Vlach 1978:67).

Medieval Revival Churches. Among the medieval revival churches, nearly half followed the picturesque aesthetic practice of providing an asymmetrical design and irregular silhouette. The other half were symmetrically designed like classic revival churches but decorated with Gothic or Romanesque style details. Many Baptist congregations are represented in the latter group of churches but other denominations are also included among them.

The earliest Gothic Revival churches in the United States followed the fashion whereby Gothic details were added to a symmetrical plan. The examples in this study following that practice are not necessarily the oldest, they merely perpetuate that earlier tradition. Among the examples is the Tate Creek Baptist Church (Figure 48) on Alabama 59 at Blacksher, built c. 1850-1860. It has a classic cornice return on the facade and entablature on the eave side. The practice of applying Gothic details on a Greek Revival design was common with vernacular builders and is referred to as Carpenter Gothic. The Frankville Baptist Church (Figure 49), a twin towered structure, is also symmetrical but was built in a Romanesque Revival style. Its gable trim, brackets, and very tall windows are from the Stick aesthetic (High Victorian period), dating this rural example c. 1880. It could be labeled, therefore, as a High Victorian Romanesque Revival, an eclectic style.

If the chapel portion of the St. Stephens First Methodist Church (Figure 50) and its facade were analyzed alone, it would illustrate the symmetrical design. The cornice return and belfry are classical details, but its overall layout is asymmetrical. During the mid-nineteenth century the Latham Methodist Church in Baldwin County followed the Episcopal Church tradition in having a corner entrance in an off-center tower (Figure 51). This church was organized in 1847 and its edifice was probably constructed within ten years of its founding.

Fortifications

During the 1790s in Washington County, Fort St. Stephens had been built by the Spanish for trade with the Choctaws. In the earliest years of American settlement in the Tombigbee River Valley, while Creek and



Figure 44. Stockton Methodist Church, Stockton, Baldwin County, mid-nineteenth century.



Figure 45. Jefferson Methodist Church, Jefferson, Marengo County, 1856.



Figure 46. Belmont Methodist Church, Belmont Community, Sumter County, 1850s.



Figure 47. Jerusalem No. 2, near Linden, Marengo County, 1940s.



Figure 48. Tate Creek Baptist Church, Blacksher, Baldwin County, 1850s.



Figure 49. Frankville Baptist Church, Washington County, late nineteenth century.

Choctaw villages were still in the area, a group of crude pioneer fortifications were built, most being stockades around a settler's home. Between 1812 and 1814 eleven or more were built along the river south of Jackson in Clarke County. At the junction of the Mobile and Alabama Rivers were Rankin's Fort (1813), Fort Mims on the Alabama River (1813), and Fort Stoddart on the Mobile River (1799). All of these forts, however, were abandoned as soon as Indians were removed from the area (Alabama Historical Commission 1978:27, 191, 192, 128; hereafter cited as AHC). Most of the former fort sites are inaccessible; some have disappeared, such as Fort St. Stephens, which was mined away in a limestone quarry. Old Fort St. Louis, the first site of Mobile, is part of a factory complex today. Fort Mims is accessible since it was made a state historic site. It was one of the forts that the Creeks attacked at the outbreak of the Creek Indian War of 1813-14, site of one of the largest massacres by Indians in the history of the nation (AHC 1978:192).

After the abandonment of Fort Stoddart, Andrew Jackson established Fort Searcy (c. 1830). Selected by Jackson, the site was on a commanding hilltop, 185 feet above sea level. Still intact, the defensive walls enclose early nineteenth century buildings. It was a fort and arsenal until the Civil War when the arsenal was removed to Montgomery. The fort was active until 1894 when it was acquired by the state. In 1902, the old 1830s barracks were renovated for use as a mental hospital for Blacks (AHC 1978:131; interview, December 1981). At the gate, a nineteenth century cypress picket fence with speared points mounts the walls.

The fort was most likely planned by a military engineer and the buildings were probably designs supplied by a government architect in Washington, D.C. The streets are laid out to form a lunette with the flat side facing the Mobile River. Fort Searcy must be one of the few old American forts along the Gulf Coast that retains many of its original buildings. "Jackson Barracks" in New Orleans of the same period is the only other comparable military institution. The builders of both of these forts constructed lasting, substantial, brick barracks with verandas and hipped roofs. While the two other buildings served as barracks (Figures 52 and 53), all one story structures were service and storage buildings (Figure 54). The crenellated towers on some of the barracks were undoubtedly later additions (Figure 53). A small one story structure, resembling a rural post office, still serves as a morgue (Figure 55).

CONCLUSION

The Black Warrior-Tombigbee valley area corridor is an interesting source of folk and vernacular architecture. There is an absence of professionally designed historical architecture between Demopolis and Mobile. Most of the vernacular housing represents folk traditions which have been enriched or elaborated upon by their builders with nineteenth century fashion, particularly the Greek Revival.



Figure 50. First Methodist Church, St. Stephens, Washington County, 1857.



Figure 51. Latham Methodist Church, Latham, Baldwin County, c. 1850s.



Figure 52. Ft. Searcy (Searcy Hospital), Officers barracks, Mount Vernon, Mobile County, 1830s.



Figure 53. Ft. Searcy (Searcy Hospital) Enlisted men's barracks, Mount Vernon, Mobile County, 1830s.

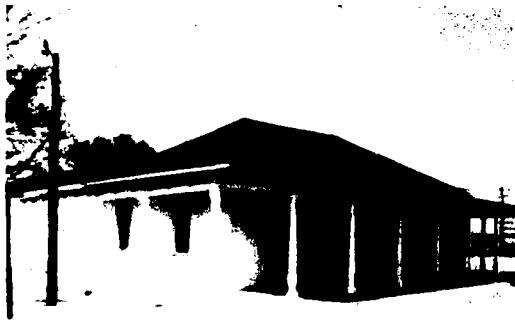


Figure 54. Ft. Searcy (Searcy Hospital), warehouse, Mount Vernon, Mobile County, 1830s.



Figure 55. Ft. Searcy (Searcy Hospital), morgue, Mount Vernon, Mobile County, 1830s.

Two European folk traditions are found in the homes in the corridor, the French creole and Anglo-American. The few examples of the older French creole can be found on both sides of the Mobile Delta. It was adopted but modified by the Anglo-Americans who moved into the area in great numbers when West Florida was ceded to the United States in 1817. In the European period, Anglo-Americans of the Lowland South dominated most of the Black Warrior-Tombigbee corridor; therefore, the vicinity has a fairly uniform cultural landscape. In contrast, the terraces on either side of the Mobile Delta have a more varied landscape that contains both Anglo-American folk houses and French creole folk houses.

The small houses were built by people representing the "plain folk" culture rather than the plantation culture and other than the Foscue house and "Evergreen" in Marengo County, they were probably built for one family farmsteads. Such families did their own work, owned at most only one or two slaves and often hired workers. Most owned 200 acres or less, thus, land holdings tended to be small (Owsley 1949:8). In 1860, only ten percent or less of all landowners in the Mobile-Tombigbee corridor, with the exception of Marengo and Sumter Counties, owned 500 acres or more (Hilliard 1972:23).

By the end of the nineteenth century, new house types of a national character, namely, the pyramidal roof cottage and bungalow, were added to the regional types in the Mobile-Tombigbee Valley and dominated to about 1930. More recent housing is mostly house trailers and prefabricated small ranch house plans.

Unfortunately, the older "plain folk" architectural traditions are being abandoned and razed in favor of the recent developments; furthermore, they are no longer so common in the waterway region. Enclaves of folk houses and scattered examples do survive but are being replaced. First and second generation log structures are now a rarity throughout the corridor and examples in good condition should be preserved. Few, if any, buildings will be affected by construction work or channel improvements in the corridor.

The 1978 Alabama's Tapestry of Historic Places should be consulted for historic listings of buildings. This guide is best for vernacular buildings but tends to overlook folk housing. Nevertheless, many historic structures and sites in the corridor are listed. Since this report characterizes the folk and vernacular architecture found along the waterway, it can serve as a guide to accompany the Tapestry and, as an aid to those who encounter a historic folk or vernacular building in the field not specifically mentioned within this survey.

CHAPTER II

WATERCRAFT OF THE BLACK WARRIOR-TOMBIGBEE

INTRODUCTION

The earliest form of watercraft used on the Black Warrior-Tombigbee system were American Indian "dugout" boats shaped from tree trunks, several of which have been discovered in this area (Figures 56 and 57). These are plain, blunt-ended, about one and one-half to two and one-half feet wide, around twelve to fifteen feet long and suitable for relatively smooth inland waters.

In 1699-1700, Iberville recorded the building of large cedar dugout boats in Louisiana by his men after the fashion of the Indian "pirogue", as it was called, as well as the use of three bark canoes apparently brought along or built by the French (McWilliams 1981:43; 111; 116). These were better suited for inland or nearshore waters than the ship's longboats and other vessels introduced to the Gulf Coast by Europeans. Dugouts, or pirogues, were used during the entire historic period. Iberville's journals are also a source for several vessel type names but, like other sources, they give little information on the details of colonial vessels (McWilliams 1981; Chapelle 1976; Morris 1927). A listing of various historic vessel types was recently compiled for the Gulf Coast and indicates the rather large number of vessel types in use over four centuries (Mistovich and Knight 1983). Possibly the earliest illustrations of European vessels are in a view of Dauphin Island (Figure 58) in which five two- and three-masted vessels and twelve smaller boats are depicted. A copy of this document is in the French National Archives. A second drawing shows the Law Concession at New Biloxi in 1720, part of which illustrates two vessel types. One is a chaloupe being built, double-ended, about 30 feet long, and the other is a small barge (Figure 59). Other such illustrations of New England harbors have been used to establish the presence of vessel types.

The southernmost portion of the BWT corridor was important for trade and fishing vessels from the bay and coast (Figures 60 and 61). Although Mobile was not a major ship building port, it was a major Gulf trade port with ship repair facilities. Some coastal trade and fishing boats and bay and river paddlewheel steamers were built locally. Sunken vessels in the corridor constitute underwater cultural resources. These include river or bay steamboats and sailing vessels in the Mobile River between Three Mile Creek and Bayou Canot and steamboat remains in upper Bayou Sara (Figures 62 and 63).

Riverboats

Settlements along the rivers used boats as their primary means of shipping produce and obtaining supplies and materials. The overland roads were difficult to use, and most remained unpaved well into the twentieth century. Thus, before railroads river transport was vital. The simplest craft were box-like flatboats, commonly used for one-way,



Figure 56. Indian dugout boats at Spanish Fort Museum, Pascagoula, Mississippi.



Figure 57. Indian dugout boat at Destin, Florida.



Figure 58. View of Dauphin Island, 1717. Author unknown. Several vessel types are depicted.



Figure 59. Camp at the Law Concession at New Biloxi, 1720. A barge and a chaloupe are shown.



Figure 60. Star Fish and Oyster Co. fishing vessels at Mobile, c. 1915.
Erik Overbey/Mobile Public Library Collection (EO/MPLC).

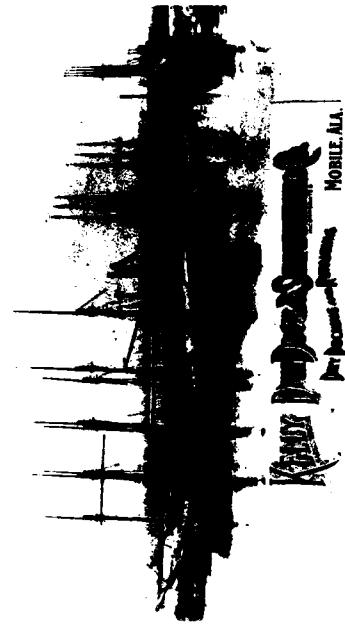


Figure 61. Schooners at Kelly Dry Dock and Shipbuilding Co., Mobile, about 1915. EO/MPLC.



Figure 62. Hull of an unidentified steamboat in the upper part of Bayou Sara, 1980.



Figure 63. Remains of an unidentified steamboat in the upper part of Bayou Sara, 1980. A brick structure lies at the surface.

downriver shipping. These were often broken up and the wood was sold. Keelboats had a more advanced design with double ends and keel and were propelled by oars, by poles or by being pulled along. Shallow draft sailing vessels were also used before steamers appeared.

Possibly the first steamboat in Alabama, launched at St. Stephens around 1818, was the Alabama. The first river steamers employed two side wheels. Although these gave great maneuverability, the cargo space was restricted. In the 1840s and 1850s, stern-wheel boats were becoming more common since they could hold more cargo and were easier to load.

Neville (1962) listed 54 riverboats built in Mobile and vicinity between 1821 and 1914. Most of the river steamboats used in Alabama, however, were built elsewhere, particularly in cities on the Ohio River (Doster and Weaver 1981:168). One of the last was the John Quill (Figure 64) built in 1907 at Jeffersonville, Indiana, across the Ohio from Louisville.

A list of the steamboats built along the Tombigbee-Alabama Rivers in Alabama is given in Appendix A (Neville 1962:13-29).

Steamboats

Portions of this section on river steamboats has been summarized from Doster and Weaver, 1981. The development of the steamboat was centered primarily in the Northeast and on the Mississippi River system. The early boats, particularly in the East, were built and operated like ocean-going vessels and before the Civil War most were sidewheelers. A vertical one-cylinder, double-acting, low pressure, steam engine moved an overhead beam up and down, from which a connecting rod drove a transverse crankshaft that spun a small propelling wheel on each side of the vessel. A heavy flywheel was used to absorb the surges of power from the engine and provide smooth operation.

To protect the sidewheels, the decks were extended on either side of the vessel forming extensions known as "guards." The guards provided valuable additional deck space for stowing cargo, and on the upper decks where the cabin passengers lived, a promenade.

In time, some steamboats came to have two engines, one for each side-wheel. This eliminated the main crankshaft and made the wheels operate independently, so that one could be run in one direction and one in the other to turn the vessel.

To supply additional steam, a second boiler was added parallel to the first and the boiler length was increased. Two chimneys, resulting from two boilers, provided less view obstruction from the pilot's wheelhouse on the top deck. The boilers were placed side by side, with connections for water at the bottom and steam at the top, without check valves. These were gradually improved in reliability and efficiency, but the materials used and the operating practices entailed a considerable risk of explosions.

Wood provided fuel for the steam boilers but the boilers and propulsion equipment were inefficient and frequent stops for wood had to be made. For pioneer steamboats, the crew was sent out to cut the wood, but the practice arose among residents along the river of operating private woodyards as a business so that steamboats could stop and buy their fuel as it was needed. By the end of the century, coal had come into common use.

In time, larger side-wheels came to be used. Few early sternwheelers were built and they were generally looked upon with disfavor. They were not easy to handle and the weight of the wheel projecting over the stern tended to cause the center of the vessel to rise up, an effect known as "hogging."

Various technical developments occurred that made the sternwheelers more attractive. Hogging was checked by the installation of heavy iron rods on each side called "hog chains," which braced the hull. The difficulty of steering a sternwheel vessel was solved by the use of multiple rudders just forward of the wheel. Power was applied to the wheel by a steam cylinder on each side of the vessel through a long beam connected to the wheel. The stroke was long and the movement relatively slow. The flow of power was smooth and the wheel was made large and heavy enough to eliminate any need for a flywheel.

Improved boilers gradually made possible the increase of steam pressure with somewhat greater efficiency in the engines. After the Civil War, steam pressure of over one hundred pounds per square inch became common. The development of auxiliary equipment improved the effectiveness of steamboat operation and steam powered capstans and winches were added.

The problem of securing the safe operation of steam engines on vessels, on both salt and fresh water, led to the adoption of the law of August 30, 1852, providing for the inspection of steam boilers on vessels by an agency of the United States Government. Standards were adopted for boilers of particular size, thickness of plate, and strength of materials; the steamboat inspectors could use tables to determine the safe operating pressure of a particular boiler. They could inspect safety valves but could not prevent alteration of the safety valves after the vessel had left port.

The average life of a steamboat was generally three to five years, although some had exceptional longevity. At the end of the nineteenth century, some boats with proper maintenance, such as the Hard Cash and Hattie B. Moore, lasted for fifteen or twenty years or more.

The average cost to build a river steamboat was from \$80.00 to \$100.00 per ton. Upkeep of the vessel over each five year period was approximately half of the original building cost (Day 1976:19), however, boats often brought in as much as \$75,000.00 in a season. Thus, it could be profitable to build and operate a boat for three to five years before it was lost and still make a considerable profit. Many times the superstructure or machinery of wrecked boats would be salvaged and used in another boat to reduce costs (Liddell 1979:8; Petsche 1974).

By the 1850s, steamboats of the 190-ton class were being constructed with an unloaded draft of only 14 inches and a loaded draft of approximately twice that (Hunter 1949:84). This shallow draft made it possible for boats to move over debris of the shallow portions of streams. The tall paddlewheels were easy to repair and could operate in more shallow water than submerged propellers of other boats (Gibson et. al. 1980:217).

Steamboats could travel at speeds from 20-30 miles per hour (Macfarlane 1851:129), certainly an advantage to successful shipping. The crew often considered the speed of their boat a matter of self-respect and races were run to demonstrate their superiority. A favorite racing length was between Mobile and the junction of the Alabama and Tombigbee Rivers, a distance of 45 miles (Liddell 1979:7). Steamboats could normally make the run from Mobile to Coffeeville on the Tombigbee, approximately 116 miles, in about 12 hours (Brown 1980:4).

Although the steamboats were well adapted to shallow water, up-river travel was made mainly during the months of high water, in winter and spring. Newspaper advertisements announced departure according to the condition of the rivers.

Warehouses, whiskey stores, and general merchandizing stores were established at landings to serve the steamboat crews, landowners, and the potpourri of people drawn to the area by the flourishing river trade. Woodyards were also built to accommodate the fuel needs of the vessels by providing timber from the surrounding woodlands for their boilers (Abernathy 1965).

The steamboats were also a source of recreation for the people of the river communities. After the cargos were unloaded and the decks cleaned, the steamboats often took charter parties for rides on the river with local bands providing music. The additional income helped support the steamboat crews during the low water season (Gibson et. al. 1980:218).

Some of the last sternwheel steamboats used in the southeast United States were operated by the U.S. Army Corps of Engineers as work boats. They served a useful function with their shallow drafts, approximately three to four feet. They were able to move into areas of the river to accomplish tasks that other boats of their size could not. In the 1950s the Corps operated three of these. One was the Mixson, named for a long-time employee of the Tuscaloosa office. It was built in Charleston, South Carolina, in 1925 and rebuilt in 1938 due to fire damage. She was 158 feet long with a draft of three and a half feet. There were two 130-horsepower, coal-fired, steam engines that powered the stern-wheel. It also had a steam turbine to power an electric generator. The first deck contained engines, boiler, galley, crew's quarters, and storage space. The second deck contained cabins, lounge, and dining room for guests or passengers. Above this deck was the pilot house (Cooke 1956).

The Corps still operates one sternwheeler today in the southeast United States. The Montgomery is not powered by steam, however, but with diesel engines. The shallow draft principle still works to ad-

vantage as it is used as a snagboat removing floating debris which might be hazardous to navigation.

The last sternwheeler working in Alabama was the diesel-powered Bigwheel, a privately owned tow boat. She capsized and sank during February, 1982.

Mobile Bay Steamers

Mobile Bay steamers continued to be used until 1927. One of particular note was the iron-hull Heroine built in Glasgow, Scotland, in 1862 as a Confederate blockade runner, and was capable of a speed of twenty miles per hour. The Heroine served for years as a bay ferry until she was badly damaged in the 1906 hurricane and scrapped. Most of the bay boats ended in disaster - they exploded, burned, wrecked, or were ruined by storms. The only stern-wheel bay ferry was the Baldwin, a steel-hull vessel built at Mobile in 1905. It sank in 1945 in the Warrior River and was scrapped. The Bay Queen and Louis D'Olive were typical side-wheel bay steamers (Figures 65 and 66).

Besides serving as ferry boats, these vessels were frequently employed as excursion boats for various occasions. Holidays, general entertainment and local events in Mobile were suitable occasions to draw a crowd on the bay boats. The last Mobile Bay ferry ran on June 14, 1927, ten days after the opening of the Cochrane Bridge and causeway (Mobile Press Register, September 11, 1958).

Disposition of Wrecked Vessels

A thorough literature search has not been made of the disposition of wrecked and abandoned vessels that operated in Mobile harbor and on the Black Warrior-Tombigbee. Appendix A will indicate at least the cause of the loss but not necessarily the final disposition. In the case of explosions and fires, it may be assumed that at least some of the debris of the vessels will be in the vicinity of the original disaster. Other vessels were towed to new locations and sunk or abandoned (Figures 62 and 63).

Photographs in the University of South Alabama Photographic Archives further indicate the litter of river, bay and ocean vessels and various materials along the sides of the Mobile River (Figure 67). There is probably so much discarded material it will be very difficult to sort it all out, although the remains of some important historic vessels are present.

The annual List of Merchant Vessels of registered sailing and steam vessels, first published in 1868, is one source for basic specific data. Dimensions, rig, tonnage, crew size, engine size, place and year built and home port are usually listed. In some issues, names of vessels lost are named, however, the final disposition is not given.



Figure 64. Sternwheeler John Quill, built 1907 at Jeffersonville, IN, opposite Louisville. EO/MPLC.



Figure 65. The Bay Queen, brought to Mobile in 1896, was 167 feet in length and 25 feet in breadth. Burned in 1927. EO/MPLC.

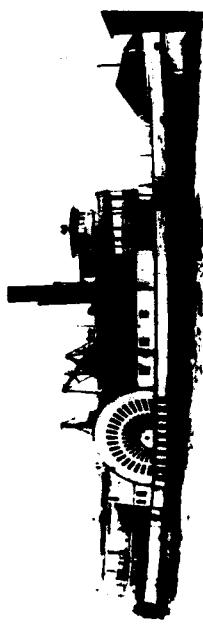


Figure 66. The Louis D'Olive, an iron-hull side-wheeler built in Wilmington, Delaware in 1861. EO/MPLC.



Figure 67. Unidentified iron hull being scrapped, Mobile. This may be from one of the bay ferries. EO/MPLC.

CHAPTER III

RIVER LIFE AND INDUSTRIES

INTRODUCTION

This section was assembled from information obtained by JoAnn Luker through personal interviews during 1980-81. It includes material on activities in the corridor and suggests that much more might be discovered in future research. Places, dates and names of informants were not provided in Ms. Luker's report.

Many people of the Black Warrior-Tombigbee corridor subsisted on or supplemented their income by hunting, fishing and trapping. Squirrel, rabbit, deer, fish, and turtles were used for food, and beaver, otter, mink, nutria and raccoon were trapped for their pelts.

Often these people were involved with more than one occupation, seasonally, or, as the economic picture changed. These occupations included turpentining, logging or working in one of the lumber mills. Most of the men interviewed began hunting, fishing and trapping at an early age and continued these activities for most of their lives. Some have spent their entire lifetime at a subsistence level.

Hunting and fishing folkways persist, using some commercial and some locally fabricated materials. A raccoon trap may still be made from a log or block of wood, but metal traps are most often used for pelt trapping. Otter and beaver are caught with a twelve-inch Conner bear trap. Traps are set in broken dams and beaver slides on the banks of the pond. Fishing techniques have changed little, although the types of fish traps have been regulated. Fifty years ago, the round wooden fish traps were six feet long, about three feet in diameter with outer boards one-quarter inch thick and four inches wide. The gaps between the boards were only one-quarter inch wide in order to keep the bait inside. The present regulations require two inch spaces so that smaller fish can escape. The traps used now are rectangular and smaller. In the 1930s, fish less than two pounds were released. Catfish sold for seven cents a pound at the Star Fish and Oyster Company in Mobile. There was a market in New York for buffalo fish, caught mainly around Demopolis, but this ended twenty years ago.

In addition to subsistence activities and fishing, three other industries were important during the twentieth century. These were "musselling" (the gathering of river clams for the manufacture of buttons), making barrel staves, and pull-boat logging.

Musselling

Along the Alabama River, Little River, and parts of the Tombigbee River, a subsistence industry known as musselling developed, in which fresh water mussels or clams were harvested for their shells. Mussels were harvested and sold for several different markets, although buttons

were the main product of this industry. Informants said the shell was used in the manufacture of false teeth and used for making pistol grips. The industry was relatively short-lived and ended about 1965. Its demise is believed to have resulted from the frequent opening of the dams along the waterways which caused an increased amount of suspended sediment in the water and this killed many of the mussels. Although they are still found in these rivers, their population has been much reduced. Dredging the rivers has also destroyed mussel beds.

The boats used for musselselling were made of cypress and were approximately sixteen feet long with a five foot beam. Two horizontal runners, one inch by six inches, were used for support inside the bottom of the boat and also to keep the shells, which were piled in the bottom of the boat, from shifting and sinking the boat. The weight of these shells was considerable; a five gallon bucketful weighed fifty pounds.

The shellfish were caught with a device called a brail (Figure 68). There were usually two brails on a boat, one hung on either side. The brails were two inch by four inch boards approximately sixteen feet long with about forty chains, two feet long, attached to each board. Five hooks were attached to each chain. The hooks were made with wires, the ends of which were melted and rounded to keep the mussel from sliding off after the shell closed onto the hook.

After the boats were filled, they would tie up and the shellfish were transferred, using five gallon buckets, to a larger boat (Figure 69). The shells would be taken ashore and trucked to a musselselling camp, usually located on the river bluffs where the shells would be cooked to separate the mussel from the shell (Figure 70).

Although the manufacture of buttons was the main product, the fresh water mussel also produced a pearl of inferior quality which sold for \$20.00 an ounce, with a few being of special quality. Buyers came to this area from Memphis, Tennessee, and the Muscle Shoals area to purchase shells and pearls. Markets as far away as Muscatine, Iowa, and Japan were reported.

Stave-Making

Commercial stave-making was introduced into the Tombigbee River valley in 1900, when men from Croatia and Slovenia, now in Yugoslavia, were commissioned to come to the United States and make barrel staves. The Tombigbee River valley was an excellent site for this work because of the availability of transportation via river barges and trains to the port of Mobile, and a plentiful supply of wood. The staves were used to make wine barrels for France, Spain, and Italy, for palm oil in Lebanon, and for Scotch Whiskey barrels.

White oak, Quercus alba, was probably the most important oak species in Alabama and the wood most often used for stave-making. The wood has every desirable quality: toughness, durability, strength, elasticity, and straight grain. It is the best available wood for



Figure 68. A flat-bottom cypress hull boat used for musselling in the fresh water rivers of the Mobile Delta.



Figure 69. Converted shrimp boat, The American Girl, used for storage for mussels and camp for crew.



Figure 70. Mussels were always cooked and placed in a round wire basket called a "shaker" to separate meat from the shells.

staves, hoops, and various homemade baskets. But the cooperage industry was almost completely dependent upon this one species and required white oak of good quality. White oak is common in all but the sandiest, rockiest and muddiest places, in nearly all parts of the state, particularly in the northern half. White oak is rarely found in the delta south of the confluence of the Tombigbee and Alabama rivers, according to Harper (1928).

The post oak, Quercus stellata, and a red oak, Quercus shumardii, were reported by informants to have been cut for staves as well. Harper (1928) noted that post oak was sawed into staves near Athens, but it was considered inferior for that purpose.

To obtain the staves, a crew of four men would go into the woods, choose their trees, fell them, and work them into staves. The work day would begin early, often just before daybreak. Their tools normally consisted of a twelve-pound broadax, an eight-pound sledge hammer, four large steel or iron wedges, four wooden wedges (eighteen inches or more in length and four inches in diameter, at the riving end), a froe, a wooden mallet, an eight-foot crosscut saw and a drawing knife. A hewing block, and sometimes a drawing bench, were also carried to each job site. The wooden mallet, six inches in diameter and twelve inches in length, was always used on the metal wedges to keep the head from mushrooming, and thus ruining the wood when split.

By mid-morning the trees would be cut down and sawed into three to four foot lengths, which was the height of the future barrel. Occasionally, the right tree would be found to make ten-foot staves for the large barrels used to age European wine.

After cutting the blocks of wood in the desired lengths, a froe would be used to make indentations on the base of the trunk, dividing the tree into eighths. The tree would be split into eight bolts using the wedges and the wooden mallet. The froe was then used with the wooden mallet to rive the rough staves from the bolts. The size of the staves were four to six inches in width from the heart to the sap side. The sap side of the stave was about three-and-one-half inches wide. The length of the stave varied from three to ten feet. The outside sap wood was always a waste produce and was never used as part of a stave.

Once the staves were rived from the bolts, they were positioned in a hewing block. A forked tree, approximately eighteen inches from the fork of the tree to the ground, was placed in the ground to support the stave in the hewing block. Once positioned, the stave-makers would take a broadax and cut off any wavy edges found on the wood. This ax was used in a stooped position with the stave and the hewing block placed between the stave-makers' feet. Slowly the stave-makers would walk backwards shaping the stave as they moved. The stave would be turned until all four sides were smooth. After the staves were hewn, they

would be taken to a drawing bench, where a drawing knife would be used to further smooth the wood and draw the staves down to specifications. For each stave made in the United States, coopers in Europe would make two barrel staves from them.

After the staves were completed they were stacked in pens, sometimes six feet high. On a good day, a crew of four men could make 300 finished staves, worth approximately \$100.00. These were allowed to dry for several weeks and, when enough had been cut and dried to fill a box-car, then they would be hauled to the nearest train station or boat landing.

The stave-makers lived like gypsies, moving from one area to another as they harvested the largest, straightest white oaks. They lived in makeshift camps in shelters made of poles, some lumber, and tree bark or, where possible, they would rent rooms in private homes.

The stave-making business waned during the Depression of the 1930s, and some stave-makers moved permanently to the North or returned to their homeland. The industry was renewed briefly before the outbreak of World War II, which caused the end of the stave-making industry in Alabama.

Pull-Boat Logging

Pull-boat logging was one of the main industries in the swamps of the Mobile River delta. It is a system of pulling logs from swamps using a winch mounted on a barge, or pull-boat. Pull-boat logging was probably introduced to the area in the late nineteenth century from Louisiana and cypress was the major tree harvested. Cypress (Taxodium distichum), though slow growing, has chemical properties which resist bacteria, making it an economically important tree. Eastman Kodak used tanks and pipes made of cypress because it is said to resist the action of acids and alkalies better than most other material. Common uses range from boat building to churns and shingles. The mature cypress was a useful, all-around, durable wood.

During the twentieth century new uses and methods of cutting timber made it desirable to harvest other species of trees besides cypress, including the black gum (Nyssa sylvatica), the tupelo gum (Nyssa aquatica), the elm (Ulmus americana), the cottonwood (Populus deltoides), and the ash (Fraxinus spp.).

The saw, shingle and heading mills were the earliest in the area and were followed by the veneer and pulpwood mills. The last type of mill introduced was called a pole mill, where poles and plywood were manufactured.

Tupelo gum does not splinter easily. It was said to be excellent for warehouse floors and freight platforms because of an interlaced grain, but it was difficult to season without warping. It did prove to be useful in making veneer as well as crates and boxes.

Pull-boat logging was used in the Mobile Delta swamp where the high waters usually do not reach over three feet. The pull-boat was a flat-bottomed barge with a roof constructed over the entire length. It had an engine which powered a complex of winches. Cables wound around the winches were run into the swamp and used to pull the large trees into the river after they were cut (Figures 71 and 72).

During the summer months the logging operation was underway. The crews were usually split, the swampers clearing runs, deadening and felling trees, trying to stay two weeks ahead of the pulling crew. Timing was critical in the summer because of the threat of infestation of pinworms to the felled trees.

Summer heat, humidity, insects and walking in swamps made the life of a pull-boat logger fairly miserable. During the work-week the logging crews lived on two-story floating quarters (Figure 73) that had a kitchen, dining room, and two bedrooms downstairs and a large sleeping area and two private bedrooms upstairs, the latter used for two White supervisors. Convict labor was once used in pull-boat logging in Alabama, Louisiana and Mississippi and German prisoners of war from Mt. Vernon, Wagarsville and Chatham were also used, according to one informant.

In preparation for logging an area, trees would be deadened in the fall by cutting a groove around the trunk through the sapwood. In the case of the cypress, the cut was made above the buttresses, or ridges, that protrude vertically around the base of the tree.

When the trees were deadened, "runs," or clearings through which the cables would be run, were cut into the woods at about 120 foot intervals, depending upon the density of the trees. The runs were laid out on lines perpendicular to the river, approximately one-half mile long. Tree stumps in the runs were often blown out with dynamite. Logs were pulled from fifty feet on either side of this run.

After securing the pull-boat to the opposite side of the river from the intended logging area, or in a dredged canal into a swamp, a crew would secure a large pulley at the far end of the run to which the rehaul cable was connected.

In use, the pulling cable was winched in, dragging a log towards the river. The pulling cable was then returned to its position for the next pull by the rehaul cable running over a large pulley. The pull cable was usually three-fourths to one inch in diameter and one-half mile long. The rehaul cable was five-eights to three-fourths of an inch in diameter and a mile long.

Logs pulled in this manner were attached to a chain yoke which ran through the end of a steel cone to the pull cable. The cones were four to five feet in diameter and six or seven feet long (Figure 74) and prevented the logs from being entangled as they were being pulled from the swamp. The cone and chains were attached to the log by two steel wedges or "pups" driven into the side of the log. Three logs could be pulled at one time. This system produced a series of long trenches in the sur-



Figure 71. Pull-boat is accompanied by the barge used to transport crew. Both boats would be towed by tugboat to area being logged.



Figure 72. Machinery used in pull-boat logging. Upper winch holds the pull cable, lower winch holds the re-haul cable.



Figure 73. Pull-boat on left is followed by two camps, boats which housed the crews during logging.

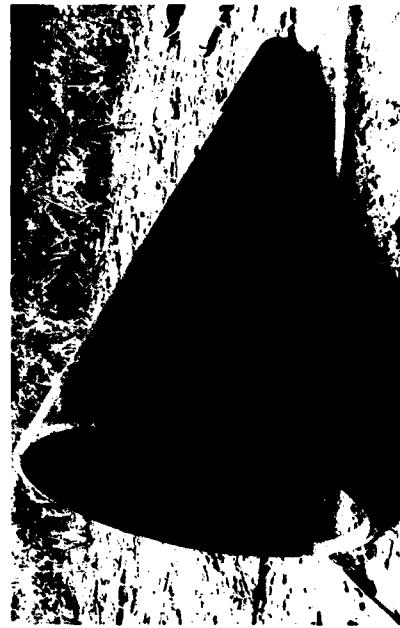


Figure 74. Steel cone used to cover the end of the log when retrieved by the pull-boat.

face which have remained for fifty years or more and can still be recognized on aerial photographs (Figure 75).

When the trees reached the bank they would be pulled over a twelve to fourteen inch tree called the "dead man." The pup-puller would use a peavey to pull one of the pups from the tree, leaving one in to pull the tree into the water where the tree would float. The weight of the cone would pull the remaining pup free and the cable would drag the cone to the barge, where it would be loaded, until it was ready to be used again.

A "puller" was the executive of the pulling crew, hiring and firing his men as he saw fit. The whole operation was orchestrated by the whistle man who carried a light rope, five-eighths of a mile long, into the run. This rope was connected to the steam whistle on board the pull-boat. Always staying on the river side of the pulling crew, he advised the engineer of the cable operation by a series of blasts. The engineer would acknowledge by sending a like number of blasts.

At the water, the logs were either rafted or put in booms. The boom would be constructed by chain-dogging logs end on end creating a semi-circle tied to shore trees. In this semi-circle, the floating logs would be prevented from drifting off. The chain-dog was a steel shaft one-and-one-half inches wide, four to five inches long and one inch thick. Two of these were connected by an eight to ten inch chain, hence the name. Chain-dogs were considered an expensive and modern item and it was cheaper to have small trees called binders, cut to secure the large logs of the booms. Log paddlers would ride the log, guiding it into the boom or into the rafts, following the instructions of the raft men. "Sinkers" were trees that would not float and were carried under "gun boats," made of two connected pontoons.

Rafts of logs were made by cutting smaller trees and using them for binders. The length of a raft would usually be five binders, or about one hundred feet long, with the width about twenty to twenty-four logs. Rafting pins, made of white oak, were hammered into holes bored in the binders and the log to secure them.

As the logs were lined up, going down river, the binders were fixed so as to give the front of the raft a cone shape. The binders would be pegged with rafting pins on the outer logs and tied with wire to the logs in the middle. Wire would be run under the logs, individually, and tied to smaller logs, on top of the raft. The end of the raft would also be closed down into a wide cone shape. These rafts would then be towed to Mobile or mills along the banks of the lower Tensaw and Mobile Rivers. Some of the larger mills were still operating at the time of this writing. Smaller, mobile operations were called peckerwood sawmills.

Pull-boat logging has largely been replaced by other methods, although at least one pull-boat was still in use in 1980 on the Mobile River. Retrieving cut timber is presently done mainly by logging tractors and timber is carried downriver on barges.



Figure 75. Shipes Canal on the Mobile River near Bucks.

CHAPTER IV
ENGINEERING STRUCTURES

INTRODUCTION

The major engineering works in the Black Warrior-Tombigbee corridor include early lock and dam structures, highway and railroad bridges and one tunnel (Table 1). The oldest of these are the remains of three lock and dam structures.

Locks and Dams

The remains of the old locks and dams were once part of a series of seventeen structures designed primarily for barge navigation between the Gulf Coast and the Warrior Basin, which provided coal for domestic and industrial use. This system, built between 1891 and 1915, is obsolete and new larger locks with greater lift have replaced it.

The first improvements for navigation began in 1870 with the removal, or trimming, of overhanging trees and shrubs, the removal of floating logs, snags and stumps, the dredging of channels and the building of retaining structures. This, and subsequent work was done using the dredge boat Black Warrior and the snag boats Tombigbee, Vienna and Demopolis (Report of the Chief of Engineers 1897). The first permanent improvements on the channel resulted from surveys made between 1888 and 1889. The improvements included a channel six feet deep at ordinary low water and the construction of a series of locks and dams. The first completed lock and dam was Lock 10 at Tuscaloosa in 1896 and the last completed was Lock 17 at Kellerman in 1915 (Report of the Chief of Engineers 1916).

The walls of Locks 1, 2 and 3 were built with concrete, as were most of the other locks. Lock 1 had a concrete dam; Locks 2 and 3 had timber crib dams filled with stone and all three dams were 500 feet wide. The width of these three locks was 52 feet. The length of Lock 1 was 281.9 feet; the length of Locks 2 and 3 was 286 feet. The vertical lifts were 12, 9, and 10 feet, respectively.

Locks 1, 2 and 3 were located in the present Black Warrior-Tombigbee corridor reconnaissance area and all were deactivated in 1960. Lock 1 near St. Stephens, at present Mile 100, was bypassed by a dredged cut-off of the meander bend on which it was located; the lock walls and dam are still standing. Both lock walls and the dam of Lock 2, near Pennington, at present Mile 168.5 were removed to a depth of 12 feet below pool level. The river wall and dam of Lock 3 near Okchai, present Mile 191, were removed to a depth of 12 feet below pool level, but the land wall remains visible at low water (Lawson 1972; Trout 1976). These structures present no problem to navigation. They can be impacted by maintenance operations if their sites are overlooked.

TABLE I

ENGINEERING STRUCTURES ON THE LOWER
BLACK WARRIOR-TOMBIGBEE RIVER

Bankhead Tunnel

Cochrane Bridge

Louisville and Nashville Railroad bridges

Three Mile Creek

Chickasaw Creek

Bayou Sara

Catfish Bayou (three)

Big Bayou Canot

Alligator Bayou

Mobile River

Little Briar Creek

Big Briar Creek

Lizard Creek

Tensaw River

Hurricane Bayou

I-65 bridge at Twenty-One Mile Bluff, Mile 20.8

Southern Railway bridge at Mile 89.9 near Jackson

U.S. 43 bridge at Mile 92.5 near Jackson

Old Lock No. 1, Mile 100

U.S. 84/Ala. 12, Folsom Bridge near Mile 115, Coffeeville

Jackson Lock and Dam, Mile 116.5, near Coffeeville

Alabama 10, Crumpton Bridge, Mile 164.8, near Nanfalia

Old Lock No. 2, Mile 168.5, Barrons Landing

Meridian and Bigbee Railroad/Ala. 114 bridge, Mile 173.5, Naheola Landing

Old Lock No. 3, Mile 191, Griffins Landing

U.S. 80 - Old Rooster Bridge site, Mile 201.5

U.S. 80 - New Rooster Bridge, Mile 204

Demopolis Lock and Dam, Mile 213.5

The other two modern structures of the new system now used on the lower Black Warrior-Tombigbee are Jackson Lock and Dam near Coffeeville, at Mile 116.5, and Demopolis Lock and Dam at Mile 213.5.

Bridges and Tunnels

Nine bridges cross the Black Warrior-Tombigbee River: two railroad, six highway, and one combination rail and highway bridge. In addition, one highway tunnel crosses at the south end of the corridor, and eleven bridges cross other channels in the Mobile Delta.

Bankhead Tunnel. This was the first highway tunnel in the South and one of the first in the eastern United States. It was built as an alternative to a bridge which would have been very expensive in this location, considering the need for a high rise structure over the middle of the harbor. Bridge piers would also have interferred with ship traffic and a bridge would have required space for a much longer approach. The Bankhead Tunnel joined the downtown part of Mobile directly with the Cochrane bridges and causeway system, which originally led into north Mobile at Plateau, a rather circuitous route for local highway traffic.

The tunnel was named for William Bankhead, a former United States Senator. Construction began on December 29, 1938 and the tunnel opened February 20, 1941. A trench was dredged across the Mobile River at the end of Government Street and seven tunnel sections, called tubes, were joined to form the tunnel. The tube sections were 298 feet by 30 feet and were enclosed by an exterior octagonal shell. From one tunnel entrance to the other was 3,109 feet, the interior width was 21 feet clear, the height was 13½ feet clear, and the interior ceiling was 47 feet below the water surface. It was maintained as a toll tunnel until the opening of the Interstate tunnel February 9, 1973. It is still used, without a toll, for local traffic.

Cochrane Bridge. This bridge was named for John T. Cochrane, chairman of a private Mobile citizens committee organized to build a series of bridges and causeways across the Mobile Delta. Originally the entire system, 10½ miles long, was called the Cochrane Bridge. It opened June 14, 1927, and included, east to west, the Blakeley River bridge of five steel spans on concrete piers, the Apalachee River bridge with a steel and concrete trestle 1566 feet long, a three mile "boulevard," the Tensaw River bridge - a steel and concrete trestle 1300 feet long, the Spanish River bridge of five steel spans on concrete piers, and a northward drive along the east side of the Mobile River to the Mobile River Bridge (now called the Cochrane Bridge). The Mobile River-Cochrane Bridge (Figure 76) is 1248 feet long, is a Parker truss with riveted joints and has a Waddell lift section 326 feet long. With the lift up the maximum vertical clearance is 135 feet, with the lift down the vertical clearance is 23 feet. The roadway is 20 feet wide with 13 feet, 4 inches overhead clearance. The State Highway Department purchased the Cochrane Bridge system in 1939.



Figure 76. Cochrane Bridge over the Mobile River. Four span Parker through truss with Waddel vertical lift.



Figure 77. U.S. Highway 43 bridge over Three Mile Creek. A deck truss swing bridge, presently fixed.

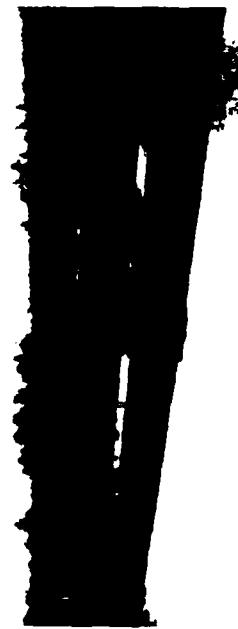


Figure 78. Southern Railway bridge over Three Mile Creek. A deck truss swing bridge, presently fixed.



Figure 79. St Louis-San Francisco Railroad bridge over Chickasaw Creek. Fixed single span Warren through truss with verticals.

Louisville and Nashville Railroad Bridges. This series of railroad bridges crossing the Mobile Delta (Figures 80-87) connect Mobile with the uplands on the west side of Baldwin County. The smaller bridges are deck trusses; the larger ones are Warren through trusses. North of Mobile, the Louisville and Nashville route first crosses Three Mile Creek on a swing deck truss bridge with horizontal clearance of 56 feet and vertical clearance of 6 feet, then Chickasaw Creek (Figure 80) on a trestle with a Warren through truss span swing bridge having a horizontal clearance of 135 feet and a vertical clearance of 6 feet. It next crosses Bayou Sara (Figure 81) on a deck truss swing bridge with a horizontal clearance of 64 feet, and a vertical clearance of 3 feet; three fixed deck truss bridges and trestles cross Catfish Bayou; a fixed Warren through truss plus one deck truss and a trestle across Big Bayou Canot (Figure 82); and a fixed deck truss crosses Alligator Bayou. The Louisville and Nashville crosses the Mobile River (Figures 83 and 84) over a four span Warren through truss, including one swing span giving a horizontal clearance of 146 feet and a 4 foot vertical clearance. East of the Mobile River the Louisville and Nashville line crosses Little and Big Briar Creeks (Figure 85) on trestles and a fixed deck truss, crosses Lizard Creek (Figure 83) on a single Warren through truss and crosses the Tensaw River (Figure 87) on a combination of a deck truss and a six span Warren truss, one span swinging to give 131 feet horizontal clearance and 11 feet of vertical clearance.

Interstate Highway 6. This high bridge, completed in 1980, over the Mobile River at Twenty-One Mile Bluff is a twin system of steel and concrete beam bridges with through steel arches resembling a giant McDonalds hamburger sign. The main span is 800 feet long with each of the two roadways 41 feet 7 inches wide. It extends 3,299 feet across the Mobile River, then joins a series of multi-beam steel and concrete girder bridge units across Lizard Creek, Middle River and Tensaw River.

Southern Railroad Bridge. This bridge was examined from aerial photographs. Crossing the Tombigbee at river Mile 90 at Jackson is a three span, through Parker or Warren truss. It appears to have a center lift span.

U.S. Highway 43 Bridge. At Jackson, near Mile 92, this stringer and multi-steel and concrete beam, four-lane bridge has a main span of 200 feet, a total length of 3,189 feet and is 40.8 feet wide in each direction. It is the third bridge in this location.

U.S. Highway 84 Bridge. Near Mile 115 at Coffeeville, and just below Jackson Lock and Dam, is the Jim Folsom Bridge, a concrete deck steel truss bridge. It has a center through span 30 feet, 7 inches wide and 400 feet long, with the total length 1,290 feet. It was completed in 1958.



Figure 80. L & N Railroad bridge over Chickasaw Creek. Combination trestle, one swing span Warren through truss and deck truss.



Figure 81. L & N Railroad bridge over Bayou Sara. A single span deck truss swing bridge with trestle approaches.



Figure 82. L & N Railroad bridge over Big Bayou Canot. Combination fixed Warren through truss with verticals, steel deck truss, and wooden trestle.



Figure 83. L & N bridge over the Mobile River at Mile 13.4. A four span Warren through truss with verticals and polygonal top chords.



Figure 84. L & N Railroad bridge over the Mobile River at Mile 13.4.
View of a fixed span.

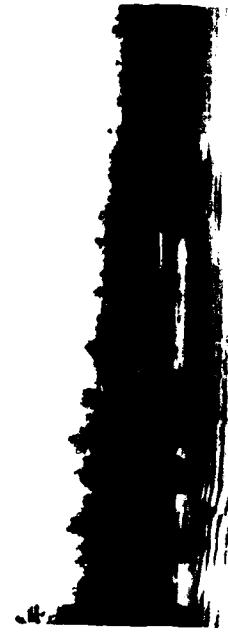


Figure 85. L & N Railroad bridge over Big Briar Creek. Combination bridge of trestles and a fixed deck truss span.

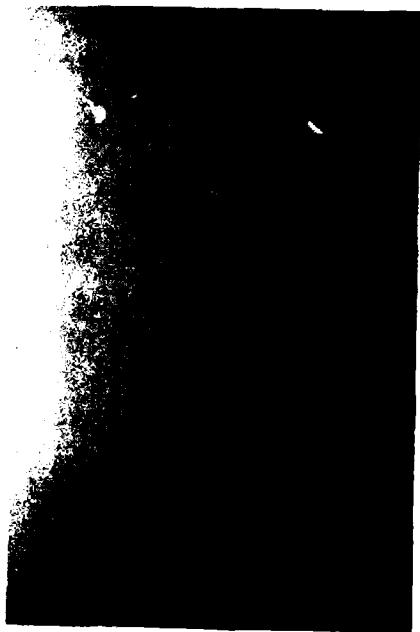


Figure 87. L & N Railroad bridge over the Tensaw River. Six span Warren through truss with verticals combined with deck truss and trestle.

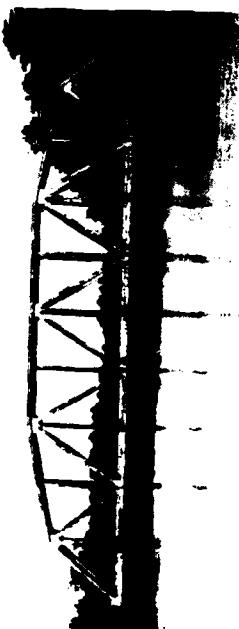


Figure 86. L & N Railroad bridge over Lizard Creek. Single span Warren through truss with verticals and polygonal top chords.

Alabama Highway 10 Bridge. Near Nanafalia the W. B. Crumpton Bridge, completed in 1930, was one of the fifteen memorial bridges built for the Alabama Bridge Corporation. The center span is a through Warren truss 170 feet long with two Warren deck trusses on each approach. The width is 20.75 feet and total length is 1,543 feet.

Alabama Highway 114 - Meridian and Bigbee Railroad Bridge. This bridge at Naheola Landing in the vicinity of Pennington, near Mile 173, was built as a railroad bridge in 1934. The "One-Way Bridge" was opened for one way highway traffic in 1958. It is a through, three span, Pratt truss with a Waddell center lift.

Rooster Bridge. A highly unusual means of obtaining funds for bridge building was the auctioning of roosters. Alabama's Rooster Bridge was not the first such effort; however, it was successful in that the state did build the bridge, perhaps embarrassed by the great publicity attending the rooster auction. After a campaign for roosters donated (for a \$10.00 entrance fee) by famous personalities, as well as anyone else, an auction was held in Demopolis on August 14 and 15, 1919. The bird "Woodrow Wilson," contributed by the President, was sold for \$55,000 to the Montgomery Chamber of Commerce. Vice President Marshall's rooster sold for \$8,500 and a hen offered by Helen Keller brought \$5,000. After expenses, a total of \$45,000 was given to the State Highway Department and the "Rooster Bridge" was completed in 1925 (Ala-West 1971). It was a three span, through Warren center lift, dismantled in 1980 and replaced by the new Rooster Bridge, three miles to the north, completed in 1977. By an act of the Legislature, the name was extended to the new bridge, a multi-beam girder, concrete deck structure 40 2/3 feet wide and 2,787 long (Parker 1982).

CONCLUSIONS

The topics included in this volume illustrate types of cultural resources of the late historic period found in the Black Warrior-Tombigbee corridor. This was not a comprehensive study but concentrated on certain topics. Clearly, many settlement features were not included at this level, such as farmstead types, outbuildings, fences, field patterns, road patterns, fords, ferries, bridges, landings, local boat types, boat yards, sawmill operations, grist mills, and others. The musselling, stave-making and pull-boat logging industries are waning or no longer exist. These were included to have a brief record of these activities and to acknowledge that probably many other historic industries have come and gone with little or no record at all. Net making, basket making, ceramics, fin and shellfish collecting, salt gathering, commercial hunting, and folk medicinal plant collecting were all accomplished without leaving a significant imprint on the landscape. Given the proper resources and time, such additional cultural resources may be identified and described.

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MAPS

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APPENDIX A: LIST OF STEAMBOATS

<u>NAME OF BOAT</u>	<u>YEAR LOST</u>	<u>CAUSE OF LOSS-----PLACE</u>
Advance	1859	Snagged, Pevey's Landing
Alabama	1824	Collided Sir "Natchez"/ New Orleans.
Alabama	1826	Burnt, Vernon
Alamo	1856	Lost, Mobile
Alfred G. Ross	1860	Snagged, Demopolis
Ambassador	1854	Burnt, Mobile
American	1915	Burnt, Mobile
Andrew Jackson	1838	Snagged, Mobile
Arkansas	1827	Snagged, Mobile
Arkansas	1856	Snagged, Mobile
Arkansas	1856	Snagged, Mobile
Atlanta	1877	Snagged, Belfast Chute
Baltic	1860	Exploded, Mobile
Belfast	1852	Burnt, Belfast Chute
Belle Poule	1849	Snagged, Mobile
Ben Franklin	1837	Exploded, Mobile
Ben Lee	1856	Snagged, Mobile
Bogue Homer	1837	Snagged, Mobile
Bradish Johnson	1869	Burnt, Jackson
C. W. Anderson	1892	Burnt, Mobile
Carrier	1890	Dismantled, Mobile
Caspian	1840	Snagged, Mobile
Charles L. Bass	1842	Snagged, Mobile
Chocktaw	1842	Snagged, Mobile
Charles May	1916	Sank, Mobile
City of Camden	1906	Destroyed by 1906 Mobile Hurricane
City of Mobile	1916	Destroyed by 1916 Mobile Hurricane
Colonel Fremont	1854	Snagged, Tombigbee River
Correo	1856	Snagged, Mobile
D. L. Tally	1900	Dismantled, Mobile
Daniel Pratt	1854	Exploded, Mobile
Dick Keys	1860	Exploded, Salt Works Lndg
Despatch	1842	Stranded, Mobile
Dover	1840	Snagged, Mobile
Duke W. Goodman	1865	Burnt, Rainwater
E. D. King	1850	Stranded, Mobile
Eagle	1846	Burnt, Mobile
Electra	1916	Destroyed by Hurricane, Mobile Bay
Eliza Battle	1858	Burnt, Kemps Lndg.
Elizabeth	1827	Burnt, Mobile
Emma Watts	1858	Snagged, Mobile
Emblem	1839	Foundered, Mobile
Emperor	1856	Stranded, Mobile
Enterprise	1858	Snagged, Mobile
Express No. 2	1840	Exploded, Blakely
F. M. Steck	1859	Snagged, Mobile
Flirt	1867	Burnt, Mobile
Forest Monarch	1855	Snagged, Tombigbee River

<u>NAME OF BOAT</u>	<u>YEAR LOST</u>	<u>CAUSE OF LOSS-----PLACE</u>
Fort Adams	1836	Stranded, Bayou Sara, La.
Fox	1840	Snagged, Mobile River
Frank S. Stone	1902	Sank, 27 Mile Bluff, Mobile
Gainesville	1843	Collided, Mobile
General Brown	1830	Burnt, Mobile
H. Kinney	1848	Exploded, Wilkins Lndg, Tombigbee
Hale		Sank, Tombigbee River
Hard Cash	1914	Dismantled Mobile
Hattie B. Moore	1906	Destroyed by Hurricane, Mobile
Hazel Dell	1866	Snagged, Demopolis
Helen	1855	Burnt, Mobile
Helen Burke	1932	Sank, 14 Mile Marsh, Mobile
Helen McGregor	1832	Collided/Str. Herald, Mobile
Henry Clay	1826	Snagged, Sisemores Lndg, Alabama
Herald	1832	Collided/Helen McGregor, Mobile
Hercules	1842	Burnt Tuscaloosa, Tombigbee River
Heroine	1855	Exploded, Blakely
Hunter	1836	Burnt, Tombigbee River
Iowa	1837	Burnt, Fairfield Tombigbee River
Irene	1850	Lost, Unknown Causes, Mobile
Ivanhoe	1840	Snagged, Mobile
James T. Staples	1913	Blew up, Powers Lndg., Tombigbee
Jewess	1868	Snagged, Mobile
John Quill	1929	Sank, 12 Mile Island, Mobile
Josie W.	1903	Dismantled, Mobile
Juaniata	1842	Snagged, Mobile
Le Compte	1861	Burnt, Mobile
Little Harriet	1849	Snagged, Mobile
Lotus No. 2	1891	Destroyed by Hurricane, Mobile
Maggie F. Burke	1880's	Dismantled, Mobile
Mary		Dismantled, Mobile
Mary	1906	Destroyed, Hurricane, Mobile
Mary Express	1840	Burnt, Mobile
Motive	1853	Snagged, Mobile
Natchez	1866	Foundered, Mobile Bay
Native	1848	Foundered, Mobile Bay
Neptune	1842	Burnt, Mobile
New Haven	1910	Snagged and sank, Demopolis
Norfork	1849	Snagged, Mobile
Norma	1846	Snagged, Mobile
Ocean Wave	1871	Exploded, Point Clear, Alabama
Osage	1824	Snagged, Osage Bar near Coffeeville
Osceola	1859	Snagged, Mobile
Peerless	1924	Rebuilt
Penelope	1846	Burnt, Mobile
Plowboy	1839	Snagged, Mobile
R. B. Taney	1865	Stranded, Mobile
R. E. Lee	1890's	Dismantled and Sank, Mobile

<u>NAME OF BOAT</u>	<u>YEAR LOST</u>	<u>CAUSE OF LOSS-----PLACE</u>
Robert Emmet	1847	Snagged, Mobile
Robert Rhea	1931	Burnt, Mobile
Rowena	1844	Burnt, Mobile
Sallie Span	1856	Burnt, Mobile
Sam Dale	1854	Burnt, Mobile
Sir William Wallace	1866	Burnt, Mobile
Southern Belle	1857	Burnt, Mobile
Sun	1840	Snagged, Mobile
Sunny South	1855	Snagged, Mobile
Sunny South	1916	Destroyed by Hurricane, Mobile Bay
Tinsie Moore		Dismantled and Sank, Snake River
Tuscaloosa	1847	Exploded, Mobile
Vincennes	1838	Snagged, Mobile
Virginia	1866	Burnt, Tombigbee River
W. J. Bethea	1914	Sank in Bayou Sara
Wade Allen	1855	Burnt, Mobile
Wanderer	1836	Snagged, Mobile
Warrior	1829	Collided with Str. "Erie", Jackson
Wild Cat	1832	Exploded, Demopolis
William Hulbert	1839	Burnt, Mobile
William R. King	1847	Collided with Str. "Winona" Tombigbee

(Source: Neville 1962:13-29)

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